From: Jeff James
To: David.Towell@ch2m.com
Cc: Bilder, Donald A UTCHQ; David Dunbar; Praskins, Wayne
Subject: RE: RFF Site - PW-17 Proposed Well Screens
Date: Tuesday, October 10, 2017 4:35:56 PM
Attachments: image001.png

David,

We've reviewed the proposed changes and they are fine with us. We are currently scheduled to finish over drilling the borehole tomorrow, so well installation should begin on Thursday.

Thanks,

Jeff

From: Towell, David/LAC [mailto:David.Towell@CH2M.com]
Sent: Tuesday, October 10, 2017 2:21 PM
To: Jeff James <jjames@Ensafe.com>
Cc: Bilder, Donald A UTCHQ <DONALD.BILDER@UTC.COM>; David Dunbar <ddunbar@ensafe.com>; 'Praskins.Wayne@epa.gov' <Praskins.Wayne@epa.gov>
Subject: RE: RFF Site - PW-17 Proposed Well Screens

Hi Jeff,

We have reviewed the logs and your proposed screen intervals below and have a couple of suggestions.

322'-332' bgs: Suggest shifting this up to ~302'-312' bgs. The resistivity responses are relatively similar to the interval you proposed, but the depth interval in comparison to the water table is more consistent with the contaminated interval at PW-15 (top of screen ~80' below the water table) and the 336'-346' bgs interval at PW-16 (tops of screen ~85' below the water table.

422'-432' bgs: Suggest shifting this up to ~402'-412' bgs. This is more consistent with the deepest interval at PW-16 (you noted ~30' elevation difference between the two locations) and is at a similar position in the e-logs relative to the apparent bottom of a more permeable sequence that ends ~440' bgs at PW-17 and ~462' bgs at PW-16.

We concur with your other two proposed intervals. Please let us know if you have any questions or would like to have a call to discuss our suggestions.

Thanks,

David Towell
Program Manager/Sr. Project Manager
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From: Jeff James [mailto:jjames@Ensafe.com]
Sent: Monday, October 09, 2017 9:07 AM
To: 'Praskins.Wayne@epa.gov' <Praskins.Wayne@epa.gov>; Towell, David/LAC <David.Towell@CH2M.com>
Cc: Bilder, Donald A UTCHQ <DONALD.BILDER@UTC.COM>; David Dunbar <ddunbar@ensafe.com>
Subject: RFF Site - PW-17 Proposed Well Screens [EXTERNAL]

Wayne,

Attached, please find the geophysical logs and the draft boring log from Well PW-17. In addition to the logs, we also considered the results of a groundwater sample we collected from one temporary well that we installed in the borehole. That sample was collected at a depth of 250 - 260' bgs, approximately in line with the shallowest proposed well screen, and contained 2.7 ug/L of perchlorate.

Based on our review of the logs and the sample result, we would propose the following four screened intervals.

- 256'-266' bgs - Good gamma , resistivity, and sonic log signatures; field log description indicates poorly graded fine sand with gravel and few coarse sands.

- 322'-332' bgs – Good gamma, resistivity, and sonic log signatures, appears to be the bottom of a sand and gravel sequence; correlates with the 336'-346' bgs screened interval in PW-16; field notes describe the unit as being well graded fine to coarse sand with silt, and trace angular gravel.

- 370'-380' bgs – Good gamma, resistivity, and sonic signatures, appears to be the top of sand and gravel sequence; correlates with the 406'-416' bgs screened interval in PW-16; field notes describe the unit as being well sorted fine to coarse sand.

- 422'-432' bgs – Good gamma and resistivity signatures (fair sonic signature) appears to be the bottom of sand and gravel sequence; correlates with 434'-444' bgs screened interval in PW-16; field notes describe the unit as being well sorted fine to coarse sand.

If possible, we would appreciate any comments on the proposed well screens as early as possible on Tuesday, 10/10.

On another note, after discussions with the driller, we believe the most likely cause of the issues with PW-16, was a failure of one of the centralizers. As a result, they have recommended that we use a different type of centralizer for PW-17 and the reinstallation of PW-16. They have used this same setup on other nested wells up to 1,000 feet deep. Two pictures of the new centralizer are

attached.

Please let me know if you have any questions or need any additional information.

Thanks,

Jeff

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